

Build Your Own

SAUNA

**Natural swimming
pool builder,
David Butler,
explains how to
make your own
small-scale sauna**



All photos © David Butler

This page: The author's sauna cum natural swimming pool changing room.
Inset: Taking the plunge in winter can mean you have to break the ice first.



*Above: The simple rectangular frame which formed the basis for the sauna.
Below: FSC Sterling board cladding.*



*Below: Finishing the insulated roof.
Bottom centre: Last summer's project – a 'natural' plunge pool.*



I have all I need for a dip in the natural swimming pool: trunks; some wood, and a sledge hammer. It has been exceptionally cold recently and the surface of the pool is frozen. The sledge hammer is needed to make a hole through the 7.5cm (3in) thick ice and the wood is for my latest creation: a sauna.

Indeed, I would never have contemplated the act of plunging into such cold water if it wasn't for the prospect of having a warming sanctuary. The sauna has brought a new dimension to the pool. I now see the cold weather as just another chance to do something exhilarating.

Building a sauna can be quite simple. The loveliest sauna I have experienced was a flimsy 1.8 x 1.2m (6 x 4ft) shed bought from a DIY store. It belonged to some friends, Seb and Amelia, and sat in the tiny garden of their rented house.

Seb just panelled the inside of the shed with hardboard. Nailed to the framework it created an air gap, helping contain the heat. He made some simple pine benches and fitted a wood burning sauna stove he borrowed. That was it. It worked brilliantly.

Having seen Seb's, the idea of making one was demystified, and a sauna would be a fantastic addition to my natural swimming pool, also serving as changing room in the summer. A roughly 1.8m (6ft) cubic shed would be a practical size and a good shape to minimise heat loss. Insulating the structure would make it even more fuel-efficient.

SHED BASE

For the base I made a rectangular frame 1.98m long and 1.8m wide (6ft 6in x 6ft) with 100 x 50mm (4 x 2in) timber for the floor joists. To keep it off the ground I rested it on four concrete blocks and a couple of substantial lengths of angle iron I had lying about. Old railway sleepers would have done.

I nailed 12mm (1/2in) thick FSC oriented strand board (Sterling Board) over the whole frame providing a rigid base to fit the wall frames on.

WALLS FRAMES

The four wall frames were 1.8m high x 1.8m wide (6 x 6ft) wide made of 75 x 50mm (3 x 2in) timber. I made one of these frames ready to accom-



modate the door, a cheap reject from the local timber merchant. With some string I tied the frames together, standing them roughly in position on the base of the sauna while I nudged the frames to line up with the base, then screwed them down and to each other. I now had a cubic timber skeleton to nail on oriented strand board.





INSULATION

I already had a large roll of 75mm (3in) thick standard glass fibre loft insulation, so I used that. Rockwool would be better, but best of all would be proper wool. Being cocooned within sheep's wool insulation seems far cosier. Next time I'll buy some or even have a go at getting some raw fleece, cleaning and treating it with borax.



The air inside the sauna will be warm and laden with water vapour. If it was allowed to seep into the insulation it would condense when it found the cooler layers, making the walls damp. The vapour barrier is often a polythene sheet keeping the warm air from entering the insulation. But as the sauna walls get too hot for plastic, a special vapour control membrane is needed.

I found a supplier (www.saunashop.com) which imports it from Finland. Supplied on a 30m² roll, 1,250mm wide, it is a tough paper with a reflective aluminium surface. It cost around £27 and one roll easily covered the walls and ceiling.

With a large stapler, insulation was fixed against the inside walls. Then the vapour membrane was laid over and stapled to the frame, with lap joints (folds) between each sheet (or you can buy special jointing tape). The inside walls were clad with standard 25mm (1in) thick tongue and groove pine floorboards. I also put these down for the floor. You are supposed to use special timber that doesn't shrink or ooze resin in the heat but I'm quite happy making do with the wood I have around and living with the imperfections.

The structure was now strong enough to fit some 75 x 50mm (3 x 2in) ceiling rafters. On top of them I put more pine boards to form the ceiling, the vapour membrane and the insulation. I fitted some roof rafters, sloping to the rear, and on top some strand board, breathable roofing membrane and corrugated iron offcuts fixed with some 65mm (2½in) roofing nails through to the roof rafters. (Only nail through the ridges of corrugated iron, to prevent leaks.) On the outside walls, over the strand board, I nailed some 12mm (½in) timber cladding left over from another project.

THE STOVE

I had intended to build a rocket stove, or trying to make a stove from an old gas bottle, but then I found a local professional welder who had been made redundant. He had turned his hand to making gas bottle stoves at home. He made them so beautifully I couldn't settle for anything less.



Above: Insulation, vapour barrier and timber cladding. Top centre: The almost completed sauna.



Above: Woodburner with engineering bricks in a tray to make steam. Below: Wooden benches fitted on two sides.



The stove came with a flat hot plate on the top. But it wasn't a sauna stove – yet.

A sauna has a pile of scorching hot stones ready to vaporise ladles of pine-scented water, engulfing the space in a rolling cloud of heat. A 'real' sauna has Finnish Peridotite Stones but I used a couple of house bricks in an old baking tray. Now, the choice of stones is a topic of great debate in Scandinavian sauna circles and, as far as I know, Class B engineering bricks have not been mentioned. There is probably a good reason for this. But my bricks, while not looking the part, seem to be functional.

Any woodburning stove needs adequate ventilation to provide for proper combustion. A vent close to the stove is best. It also reduces draughts drawn in from around the door. The flue is a length of double skin stainless pipe from a reclamation yard. It stands straight on the stove outlet and emerges through a hole in the roof.

It is beyond me to give advice on

installing a stove, especially as I've already scorched the wooden paneling behind the stove. I have since pulled the stove further from the wall and used some pieces of scrap plywood to protect the pine, but I do need to fit a proper heat shield.

Inside, along two walls, I fitted an 'L' shaped pine bench, 60cm (2ft) deep so there is plenty of space to shuffle around, and they are long enough to fully stretch out.

FIRE & ICE

On a frosty day, firing up the stove with a few dried raspberry canes and timber offcuts, the sauna comes alive and floods with warmth. When thoroughly heated through, there comes one more luxury a body craves – drenching in cool water.

PLUNGE POOL

Last summer I built another natural pool, this time a small plunge pool. Measuring 8 x 6m (26 x 20ft) it is a more practical size for many of us than a full size swimming pool, and a perfect partner for the sauna. It is

built the same way as my original pool featured in *PM66*, just scaled down. I filmed the making of both these pools. So, if you want more detail of how to make a natural swimming pool then I thoroughly recommend an excellent DVD – well I would do wouldn't I?! – *Natural Swimming Pools – A Guide to Designing & Building Your Own*.†

I hope to run a couple of day courses this year on constructing your own natural swimming pool, so let me know if you're interested. I'll post details on my website:

www.paganbutler.co.uk

† *David's DVD, Natural Swimming Pools – A Guide to Designing & Building Your Own*, price £19.95, is available in PAL from www.green-shopping.co.uk or call us on 01730 823 311. See below.

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Learn How To Build Your Own Natural Swimming Pool

In this film, David Butler takes you through two projects step by step. The first shows you how to build a plunge pool, an ideal nature reserve that you can swim in too and the perfect complement to a home-made sauna! Learn how to design the structure, build the swimming area, fit the liner, plant the edges and make a simple solar-powered pump to filter the water. The second part of the DVD shows David's first project – how to make a full scale natural swimming pool – critically he also shares his mistakes so you get the benefit of his experience. Made by a professional filmmaker who is also a hands-on practitioner and a master recycler, this practical film gives you all the information you need to enable you to build a beautiful swimming pool / wildlife habitat for a fraction of the cost of one installed by a professional contractor.

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